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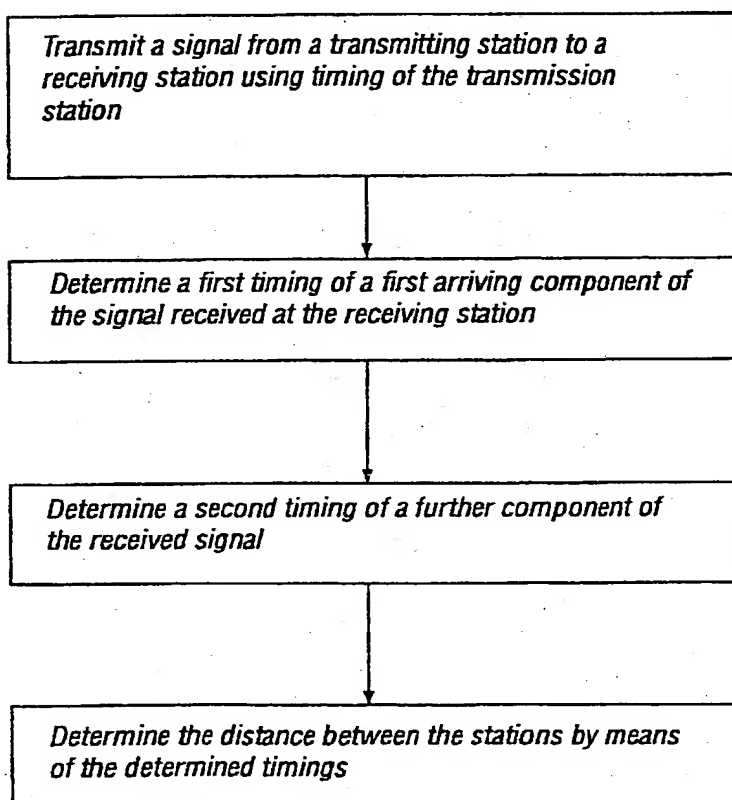
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(54) Title: **DISTANCE ESTIMATION IN A COMMUNICATION SYSTEM**

(57) Abstract: The present invention relates to estimation of the distance between stations that communicate in a communication system over a radio interface. In the system at least one of the stations transmits signal bursts in time slots in accordance with a timing structure and at least one station receives the signal bursts. The method comprises determination of a first timing of a signal burst received at the receiving station, the first timing being associated with the first component of the received signal burst that meets a predefined condition. A second timing of the received signal burst is also determined for use in adjustment of internal timing of the receiving station for receiving and/or transmitting further signal bursts from and/or to the transmitting station. A timing offset is also determined between the stations. The distance between the stations is estimated based on the timing offset and the first timing of the received signal burst.

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